

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

*Docket No. 7032
Joint Petition of Vermont Electric Power
Company, Inc., Green Mountain Power
Corporation and the Town of Stowe Electric
Department for a certificate of public good,
pursuant to 30 V.S.A. Section 248, authorizing the
so-called Lamoille County 115 kV Project,
consisting of the construction of a transmission line
from Stowe to Duxbury, Vermont, and
accompanying facilities*

**GREGG HILL RESIDENTS
INITIAL BRIEF**

August 10, 2005

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¹ 1.6/9.4

BRIEF AND PROPOSED FINDINGS OF THE GREGG HILL RESIDENTS

The Gregg Hill Residents (GHR), a party in Docket 7032, through its undersigned representative, respectfully submit the following proposed findings of fact and argument, and request that the Public Service Board consider and adopt these findings in its Order in this matter.

I. BACKGROUND & OVERVIEW

The nine landowners known collectively in this Docket as the Gregg Hill Residents were among about 184 landowners identified by the Petitioners as likely to be affected by the installation of the Lamoille Country Project's (LCP's) planned – but at that time not yet formally proposed – upgrade of the 34.5 kV transmission line that runs through the affected Gregg Hill properties. The upgrade would tear down the existing 34.5 kV line and build in its place a two-line system – a 34.5 kV line and a 115 kV line within the same 100-foot ROW.

There ensued several meetings of affected landowners, characterized by strong expressions of concern over the negative effects of the LCP on individual properties and on the aesthetics and the historic character of the Gregg Hill Road neighborhood. On July 16, 2004, at the request of one of the landowners, Vermont Electric Company's (VELCO) David Mace conducted a walking visit of the transmission line corridor, joined by a group of affected landowners. During this site visit, one landowner suggested that all of the objections to the upgraded corridor as planned could be obviated by moving the corridor several hundred feet farther from Gregg Hill Road to a route just inside the eastern boundaries of the affected properties, beginning at the place where Gregg Hill Road emerges from the state forest.

At the outset, the group of landowners recognized that in order to implement the reroute (i.e., swap existing for new rights-of-way) through their properties, it would also be necessary to reroute (swap existing for new) rights-of-way (ROWs) through a small sector of the Mt. Mansfield State Forest. Rerouting the ROW through the forest was and is seen as the only way to bring our proposed Reroute line to the eastern boundaries of the GHR properties.

On October 12, 2004, seven of the landowners composed, signed, and sent to David Mace of VELCO a letter verbally describing the proposed reroute through their properties and agreeing to relinquish their rights to a 100-foot corridor for LCP's 34.5/115 kV lines along their eastern boundaries in exchange for titles to the 100-foot corridor of the existing 34.5 kV transmission line. [GHR Cross-1] Because VELCO subsequently indicated that they saw merit in the reroute, the landowners hoped that their proposed change could be incorporated into VELCO's formal petition to the Board for a Certificate

of Public Good (CPG) authorizing the Petitioners to proceed with construction of the upgraded transmission line. However, for various reasons – including the shortness of the time available to do the necessary pricing and engineering planning, along with the likely need for legislative approval of a right-of-way (ROW) swap in the state forest – the Petitioners did not submit the landowners’ proposal to the Board for consideration.

When the proceedings in Docket 7032 got underway, the seven landowners successfully petitioned the Board for intervenor status. That petition included a map of the proposed reroute along Gregg Hill Road, showing an approximated new route for the 34.5/115 kV upgrade lines through an estimated 900 feet of the state forest as it crosses Gregg Hill Road. Later, two other Gregg Hill landowners petitioned the Board to extend the proposed reroute through their properties, northward to the place at mile 5.7 where the line crosses Gregg Hill Road again. The Hearing Officer designated the group Gregg Hill Residents (GHR), and their proposal came to be known as the Gregg Hill Reroute (Reroute).

The Reroute through the nine properties is approximately 1.6 miles in length (mile 4.1 to mile 5.7), which is about 17%² of the 9.4-mile length of the route of the proposed new 34.5/115 kV lines. Including the estimated portion through the state forest beginning at about mile 4.0, the Reroute is about 18%³ of the length of the 34.5/115 kV lines as proposed in the LCP.

In the ensuing brief, we will show that the Gregg Hill Reroute will yield the following benefits to the public good: (a) eliminate, along 1.6 miles of Gregg Hill Road, the undue adverse aesthetic effects of the LCP as proposed; (b) preserve the historic rural/woodland character of Gregg Hill Road; (c) bring the 34.5/115 kV lines’ southern crossing of Gregg Hill Road into conformity with best practices in the electric transmission industry; (d) avoid losses of property-tax revenues by the town of Waterbury and the state of Vermont; and (e) do so without diminishing or impairing the public’s enjoyment of the recreational resources of the Waterbury Reservoir.

II. ELIMINATING UNDUE ADVERSE AESTHETIC EFFECTS

30 V.S.A. §248 sets out the conditions governing the granting of certificates of public good (CPG) by the Public Service Board. Subsection (b)(5) covers aesthetic considerations: *with respect to an in-state facility, will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety.*

10 V.S.A. §6086(a)(5) states that an adverse impact on the environment is “undue” if: (1) *the project violates a clear written community standard intended to preserve the aesthetics or scenic, natural beauty of the area;* (2) *it offends the sensibilities of the*

² 1.6/9.4

³ 1.7/9.4

average person; (3) the applicant has failed to make available reasonable steps to improve the harmony of the proposed project with its surroundings. This three-prong test has become known as the Quechee test.

A. Satisfying the Quechee Test

Regarding prong 1 of the Quechee test, to the best of our knowledge, the GHR reroute does not violate any written community standards of the Town of Waterbury.

In effect, prongs 2 and 3 ask if the project offends the sensibilities of the average person, and if so, has the applicant taken reasonable steps to correct any adverse effects. The latter criterion is commonly referred to in these proceedings as “mitigation”. We will apply these two criteria to both the LCP as proposed and to our proposed GHR Reroute.

The expert witnesses on aesthetics from VELCO and the Department of Public Service (DPS) agree that the aesthetic effects of the LCP, as proposed, on the GHR properties would be unduly adverse unless mitigated.

B. Testimony on Aesthetics of the GHR Reroute

1. DPS Testimony on Aesthetics

Referring to the proposed LCP corridor from mile 4.0 to mile 5.7 in the Gregg Hill area, DPS aesthetics expert witness David Raphael writes: *This area is scenic and has a rural feel of woodlands and open pastures, treelines and hedgerows, which will be adversely impacted by the presence of the two lines and with new poles at a minimum approximately 10 to 20 feet higher than at present. This factor and the proposed increased clearing and removal of mature trees and screening trees, which currently deemphasize the corridor, will shock [sic] the average person and necessitate sufficient mitigation measures. . . To avoid an undue, adverse determination all of the following steps are necessary to satisfy the Quechee standard.* Summarizing, these recommendations for mitigation are (1) employment of the single-pole configuration, (2) at mile 5.7 (the northern end of the Gregg Hill properties), set the poles back as far as feasible from Gregg Hill Road, and (3) implement a detailed plan for screen planting and buffering of all impacted residences, along with careful delineation of existing screen and buffer vegetation and how to protect/retain existing and important wooded areas and individual trees. [DPS-DR-1 at 24-25]

Mr. Raphael later testified: *I also believe that careful pole placement, with **aggressive and extraordinary efforts** [emphasis added] made to ensure the retention of the existing buffering and accommodating vegetation in the vicinity of the Magdamo-Abraham, Orr and Bankson residences, as well as additional new plantings, will help to satisfactorily mitigate the aesthetic impact of the upgraded line with its poles and conductors. There will still be an adverse impact here, and I understand the concerns of the Gregg Hill residents and concur with some of the concerns raised by Mr. Orr – the proposed*

upgrade will definitely have more of an impact on aesthetics than the current 34.5 kV line does – but I believe an undue adverse impact can be avoided with carefully developed and considered mitigation measures. I also should add and emphasize that the final detailed mitigation measures should be developed with the direct involvement of the affected residents and property owners. [Raphael rebuttal pft 6/27/05, at 2-3]

Mr. Raphael amplified some of his opinions on the aesthetics of the GHR Reroute during cross examination [tr 7/18/05 at 118-123]. He agreed that the LCP's two-pole configuration, with one pole much taller than the other, contributes to the aesthetic adversity of the proposed route, and that configuration accounts for the need for **aggressive and extraordinary** mitigation measures. [emphasis added] [ibid at 118-119]

He also stated that *there was not sufficient information to determine that it* [the proposed LCP line with the mitigations then being discussed] *would pass Quechee*. He added that, if failing the Quechee test were considered as a grade of "F", the aggressive and extraordinary measures he recommends would bring it up to barely passing: *D is passing. I think that's probably a fair characterization.* [ibid at 120-121].

When asked if he agreed with GHR's assertions that there were aesthetic advantages to properties all along the length of their Reroute, witness Raphael answered: *Where I draw the line with your proposal is with regard to the state forest property. And I think beyond that, you know, I certainly can support your recommendations to move the line farther away from the Gregg Hill corridor.* [ibid at 122-123]

2. VELCO testimony on aesthetics of GHR Reroute

VELCO aesthetic expert witnesses Terrence J. Boyle and Adam M. Portz responded thus when asked about the GHR Reroute: *We have visited the site and VELCO has flagged a proposed right-of-way* [for the portion of the Reroute through the state forest]. *From an aesthetic standpoint, this proposal is perfectly acceptable. We have a minor concern with the potential visibility of this change from the Waterbury Reservoir but it appears that existing vegetation will provide adequate screening. Our understanding is that the environmental, archaeological, and other analyses have not been completed* [for the portion of the Reroute after leaving the state forest], *but, clearly, moving the line to the east of Gregg Hill Road and behind the existing residences as proposed is an aesthetic improvement.* [emphasis added] [Boyle and Portz rebuttal pft 5/23/05 at 16-17]

Messrs. Boyle and Portz later testified about their recommendations: *VELCO has filed a route that meets the Quechee Test. An alternative route that is located to the east (behind) the houses on Gregg Hill does have aesthetic advantages from Gregg Hill Road and from the residences located on Gregg Hill. It is not without its trade-offs, however. It is more expensive, crosses Forest and Parks land, and has engineering and environmental challenges. From an aesthetic perspective, if the Board decides to order the so-called Gregg Hill reroute, we believe it can be built in a way that meets the Quechee Test.* [Boyle and Portz surrebuttal pft 6/27/05 at 4-5]

In cross-examination, Mr. Boyle was asked: *Would you say moving the line from where it is in front of some of the houses in the middle of some of the properties [to] behind all of the properties it would be a rationalization of that route in the sense that I've mentioned?*

Response: *Yes. I'm sorry. One of the things that transmission line try to do is stay in the existing corridors unless there's overwhelming reason not to stay in the corridor and recognizing in this case that a lot of the properties have developed and built their homes around the corridor same as the NRP. Also there's additional environmental and cost impacts for creating a new corridor versus working with an existing corridor, but also if you are laying out a new route [i.e., the Gregg Hill Reroute], **this would be a preferred location if the lots were in this** [their present] **configuration. It's** [the Reroute's] **in back of the lots, it's out of sight and out of mind, and that's probably basically where the Green Mountain Power** [went] **when they laid out this line 50 some years ago – that's what they were looking for, staying away from residential areas and so forth.** [emphasis added] [tr 7/8/05 at 64-65]*

C. Effectivity of Mitigation Measures

Testimonies from expert witnesses establish that the LCP route as planned will fail the Quechee test **without** substantial mitigation measures. With all due respect to the aesthetic experts involved, we submit further that even with these costly mitigation measures, the LCP still may not pass the Quechee test.

For example, under cross-examination, Mr. Raphael – a distinguished landscape architect and planner, university lecturer, and consultant – was asked if LCP's two-pole configuration, with one pole twice the height of the other, was unusual in a residential area. He responded that he had **never seen it**. He added that this design **contributed to the aesthetic adversity** of the LCP configuration and accounted for the need for "aggressive and extraordinary" mitigation measures.[tr 7/8/05 at 118-119]

In cross-examination, Mr. Boyle expressed similar thoughts about the difficulty and magnitude of the necessary mitigation measures. He indicated that it may be necessary to bury some distribution lines in order to allow more flexibility for the placement of the new, taller 115 kV poles. [tr 7/8/05 at 55] He also indicated that the lines could be shielded from motorists by plantings close to the road. [ibid at 61]

Given the fact that the 115 kV poles at mile 4.1, very close to three Gregg Hill residences, are planned to be 84 ft and 79 ft tall, it is difficult to imagine how any plantings could mitigate their adverse effect. Mr. Boyle's suggestion of planting screening trees along the roadway would indeed hide the lines from the view of motorists, but would certainly degrade the aesthetics of the everyday-living environment of the landowners.

Early in the certification process, GHR asked VELCO to direct us to an installation of a two-pole configuration similar to that of the LCP, one that was in a residential

neighborhood similar to that of Gregg Hill. We were directed to two installations, in Warrensburgh, New York and in Georgia, Vermont. Neither of these installations was in a residential neighborhood, much less one resembling that of Gregg Hill. [GHR-1, Figures 3 and 4] So at this point, the Board doesn't know what that configuration will look like in the Gregg Hill neighborhood. GHR strongly feel that not enough attention has been paid to the egregious effect of the very tall 115 kV poles along with the two-pole configuration on the rural/woodland character of the Gregg Hill neighborhood. We cannot afford to be surprised.

The LCP lines as proposed would thrust 115 kV poles above the ridgeline on the scenic Boschen property. [ibid, Figure 8] The LCP lines would more than double the adverse aesthetic effects of the existing 34.5 kV line that runs through the middle of the Lillis' property, greatly reducing that young family's options for developing their 52 acres. On the 53 acres of the Bieler property, informally dedicated to public enjoyment as a wildlife refuge, the H-pole LCP lines proposed by VELCO would likely keep the 115 kV line below the scenic ridgeline, but that solution would certainly create a more-adverse aesthetic effect than the existing line does.

The uncertainties raised by these considerations, along with their predictable adverse aesthetic effects, will be removed if the GHR Reroute is approved. By moving all the lines several hundred feet farther from Gregg Hill Road, the Reroute will bring this portion of the LCP line into closer harmony with the historic rural/woodland character of the Gregg Hill neighborhood.

D. Cost of Mitigation Measures

Mr. Raphael testified that, as an experienced landscape architect involved in the aesthetics of landscaping portions of development projects, . . . *you budget anywhere from 5 to 15 percent of a project to deal with the exterior landscape and the screening and the buffering and the tree planting and all of those associated elements.* [tr 07/08/05 at 87] Calculating that the 1.6 miles of the GHR Reroute (mile 4.1 to 5.7) is 17% of the total length of the proposed 115 kV line⁴, its share of the total cost of the project is \$3,451,000⁵. According to Mr. Raphael's rule of thumb, the amount typically allocated to mitigation measures, if applied to the Reroute, would range from \$172,550⁶ to \$517,650⁷.

VELCO witness Kim S. Moulton's first estimation of the additional cost of the GHR Reroute was *several hundred thousand dollars*. [Moulton pft 5/23/05 at 3] This amount is within Mr. Raphael's budget range, albeit at the high end. DPS witness J. Riley Allen had Ms. Moulton's 5/23 estimate in mind when he referred to the cost of the GHR Reroute as a reason for recommending that the Board not accept the GHR Reroute. [Allen

⁴ 1.6/9.4

⁵ \$20,300,000*0.17

⁶ \$3,451,000*0.05

⁷ \$3,451,000*0.15

surrebuttal pft 6/27/05 at 2] (Mr. Allen later updated his cost estimate based on Ms. Moulton's updated figures.)

Ms. Moulton updated her estimate of the cost of the GRH Reroute to the lower amount of \$173,850. [Moulton surrebuttal pft 6/27/05 at 5] This amount is at the bottom of Mr. Raphael's budget range for a typical cost of mitigation measures. Bearing in mind the "aggressive and extraordinary" mitigation measures recommended by Mr. Raphael and the possibility of having to underground distribution lines as mentioned by Mr. Boyle, the Board can have little assurance that the cost of mitigating the undue adverse aesthetic effects of the LCP line in the Gregg Hill area will fall within Mr. Raphael's budget range at all, much less near its bottom.

E. Engineering Feasibility of the Gregg Hill Reroute

Ms. Moulton testified to the engineering feasibility of the Gregg Hill Reroute: *If the Board finds that the proposed reroute is consistent with the public good, then the work done by VELCO and its consultant, Burns and McDonnell, shows that it can be built.* [Moulton surrebuttal pft 6/27/05 at 6]

F. Unique Historic Environment of Gregg Hill Road

GHR have invited the Board's attention to the special historic character of the Gregg Hill neighborhood. [Orr pft 7/27/05 at 8-10]

We pointed to the fact that many Gregg Hill residents on both sides of the road – not all of them members of the GHR group – as private citizens and at their own expense, have contributed substantially to the public good by preserving the historic character of Gregg Hill Road. *These faithful stewards of the land (Bieler is a member of GHR) maintain and pay property taxes on [hundreds of acres of] undeveloped forest land that preserves the rural/woodland character of the neighborhood and benefits the whole state of Vermont through tax revenues and fostering the state's reputation as a beautiful, wholesome place to live, work, and visit.* [ibid at 9]

Further, 30 V.S.A. §248 subsection (b)(5) protects historic sites, among other resources, from unduly adverse aesthetic effects. The historic character of the Gregg Hill neighborhood dwells not only in the individual early-1800s houses that have been continuously occupied for more than 180 years, but even more ubiquitously in the unpaved road itself, the fences and dams and meadows that the landowners maintain, and in the rural/woodland landscape – all of which still evoke the environment as it was in Thomas Jefferson's time. Then, the area was farmland. Now, it is country-style living. Its essential Vermont character endures.

The LCP's two-pole lines, with their 80-foot-high industrial-size 115 V structures, obviously do not conform with the historic Gregg Hill environment. The GHR Reroute would move those structures out of sight.

From the considerations above, we submit these findings:

Finding 1 The proposed LCP route through the privately-owned portion of Gregg Hill Road (approximately mile 4.1 to mile 5.7) will fail the Quechee test without substantial mitigation.

Finding 2 Although details of VELCO's final mitigation measures have not yet been disclosed or even fully formulated, those measures will most likely produce a new adverse aesthetic effect on the environment, even if the mitigation measures raise the LCP installation barely above the level of "unduly" adverse.

Finding 3 Serving as an alternative mitigation strategy for the LCP, the Gregg Hill Reroute from mile 4.1 to mile 5.7 will not only cure the potential "undue" adverse condition; it will actually enhance the aesthetic effects of about 17% of the total length of the 34.5/115 kV line⁸.

Finding 4 The added project cost of the Gregg Hill Reroute – including the portion through the state forest – will likely be comparable to the cost of VELCO's contemplated mitigation measures and will definitely be in the low range of typical project budgeting for such measures.

Finding 5 The entire Gregg Hill Reroute from about mile 4.0 to 5.7 is feasible from an engineering standpoint.

Finding 6 The Gregg Hill Reroute will make the 115 kV and 34.5 kV transmission lines more harmonious with the historic rural/woodland character of the Gregg Hill neighborhood than the existing 34.5 kV line is or the proposed LCP lines would be.

III. ALWAYS UPGRADE TRANSMISSION LINES IN SAME CORRIDOR?

Without reference to any particular transmission-line project, it makes sense to prefer to upgrade an existing line within the existing corridor, because that would usually be the least-cost alternative, and the one that would least disrupt homeowners who had built around the existing line. However, in the case of the GHR Reroute, there are cogent reasons for relocating the existing line: (a) the cost of the Reroute, treated as a means of mitigating a potential undue adverse aesthetic effect on the environment, will have been provided for in the project cost accounting; (b) the existing 34.5 kV line will be taken down anyway in the LCP plan – and then rebuilt in the same ROW; (c) the affected landowners did not merely consent; they proactively initiated the proposed change in the corridor; (d) the new corridor will give present and future landowners the maximum flexibility in using and developing their properties; (e) the existing corridor was laid

⁸ 1.6/9.4

down some 55 years ago, when the location of dwellings and the patterns of land use were significantly different from what they are today and will be in the future.

IV. WHO BENEFITS FROM THE LCP?

If the Board grants Docket 7032's petition for a Certificate of Public Good, then it will by definition have found that the LCP does benefit the general good of the people of Vermont. However, testimony by ANR witnesses has alleged that the Gregg Hill Reroute is designed to benefit only a "few" landowners at about mile 4.1. In turn, the ANR testimony has been used by DPS witnesses as a sufficient reason to reject the Reroute. All this despite abundant testimony describing the Reroute's benefits to the Gregg Hill neighborhood and the state of Vermont. ANR's assertions will be discussed in *V. THE REROUTE THROUGH THE STATE FOREST*.

GHR feel that it is therefore appropriate to establish the fact that the nine landowners of our group – and indeed all of the 126 affected landowners in the town of Waterbury – receive at most indirect benefits from the LCP. The purpose of the existing 34.5 kV line and the LCP's proposed 34.5/115 kV lines is to provide electric power transmission to Lamoille County, mainly the town of Stowe. Most of the economic benefits of the LCP will thus be realized by residents and business establishments in that county and that town.

Under cross, Ms. Moulton was asked specifically if the [LCP] 34.5 kV line would provide power to the Waterbury Center load in the event of a failure of the 115 line. She answered: *No. It's more specifically the Stowe area because GMP, Green Mountain Power, owns a power line from Middlesex to the Blush Hill tap through what we call the Little River Road, but it's the 3312 route that follows the state forest around the back side of the mountain. That would be – if the 115 was lost, that line would likely be capable of backing most, if not all, I believe it would be capable of backing up all of the Duxbury, Waterbury, and Waterbury Center loads. . .* [tr 7/6/05 at 21-22]

DPS figures show how the distribution of benefits is reflected in the allocation of costs – 53.43% to Stowe Electric Department and 17.81% to Green Mountain Power, the utility that serves the town of Waterbury. [Foley direct pft 4/11/05 at 4]

GHR proposed the Reroute specifically for the purpose of mitigating the potential undue adverse aesthetic effects of the LCP as proposed. Such mitigations are acknowledged to be in the public good; indeed, they are mandated in §248(b)(5). GHR do not, as individuals or as a group, stand to realize any economic or other personal gain from the Reroute – or from the existing 34.5 kV line.

That said, GHR recognize that our neighborhood and our town do benefit **indirectly** from the use of our lands as a throughway for delivering electric power to Lamoille County. We discuss various approaches to cost accounting for those economic and social benefits

in VI. APPROACHES TO COST ACCOUNTING AT THE PROJECT, TOWN, AND STATE LEVELS.

From the considerations above, we submit this finding:

Finding 7 Neither the LCP as proposed by VELCO nor the GHR Reroute will result in any direct economic benefits to any of the individual landowners in GHR.

V. REROUTING THE LINE THROUGH THE STATE FOREST

A. Swapping ROWs in the State Forest

To mitigate the potential undue adverse aesthetic effects of the LCP as proposed, the Gregg Hill Reroute will run mainly along the eastern boundaries of the GHR properties. To reach its starting point at the southeast corner of the Magdamo-Abraham property, the Reroute necessitates that ANR swap its existing ROW for the 34.5 kV line, in exchange for a ROW of the same width and roughly comparable length and in the same corner of the state forest. The existing ROW in the exchange will revert to forest. The width of both ROWs in the exchange is 100 feet.

10 V.S.A. §2606(b) allows the Agency of Natural Resources (ANR) to exchange portions of state lands in this manner, upon approval by the state General Assembly. Anticipating this need, and not wanting to delay the §248 proceedings while the General Assembly is not in session, the General Assembly (House and Senate) passed JHR040. This resolution authorizes the specific exchange of ROWs described above, with two provisos: (a) the Public Service Board finds that both the LCP and the GHR Reroute promote the good of the state, and (b) the commissioner of Forest, Parks and Recreation approves the location of the route through the state forest.

B. Benefits of the Gregg Hill Reroute to the State Forest

In addition to enabling the rerouting of the 34.5/115 kV line along the eastern boundaries of nine Gregg Hill properties, the portion of the Reroute through the state forest will enhance the aesthetics of the state forest in significant ways.

The place in the forest where the existing and LCP-proposed ROW crosses Gregg Hill Road will be moved about 150 feet south of its present crossing. This will eliminate the offensive view of transmission lines meandering across the road for about 250 feet, a view that would become even more aesthetically adverse – unduly adverse, in our opinion – if the single 34.5 kV line were replaced by a two-pole 34.5/115 kV system. [GHR-1, Figures 2 and 3] Comment: these lines, existing and planned for the LCP, are transmission lines. Best practices in the industry prefer that such lines cross a forest road at about right angles. See discussion in second paragraph below.

Moving the crossing about 150 feet south would also create a more natural and inviting access to the informal trail leading from Gregg Hill Road to the popular Sunbathers' Rock on the Waterbury Reservoir. In the present and planned LCP route, the hundreds of hikers who use this trail every year begin and would continue to have to begin their experience by walking under an intimidating two-pole structure towering as high as 80 feet above them. In the Gregg Hill Reroute, the lines would be removed from this popular access point. The lines would come into view closer to and at the water's edge of the Waterbury Reservoir. [surrebuttal pft Lillis 6/24/05 at 2-4]

Moving the crossing about 150 feet south would also bring the new crossing into accord with best aesthetic practices in the electric transmission industry. Mr. Boyle discussed the aesthetic advantages of having a transmission line cross a road in the forest at approximately a right angle: *Well optimally you cross roads at right angles, so close to right angles as you can get the structures away from the line of sight of the driver, passenger. Q. Now that is exactly what this alternative [the Gregg Hill Reroute] we are proposing would do, right? A. Yes.* [tr 7/8/05 at 72]. Later Mr. Boyle discusses the differences in a professional's approaches to the location of distribution vs. transmission lines. *Q. Do the considerations change? A. Not in the sense that you're asking the question, no. The principles of design still apply. The difference being the distribution lines by their nature are along roads because they usually serve residences that are along the roads.* [ibid at 74]. GHR Cross-8 is a series of photographs illustrating an electric power line crossing a road in the forest at a right angle. In the Gregg Hill Reroute, a motorist, walker, or runner would see the power lines crossing the road for the briefest period, and then the lines would disappear into the forest.

C. The Non-effect of the Gregg Hill Reroute on Users of the Waterbury Reservoir

VELCO has flagged several routes through the state forest on Gregg Hill (the hill rising above the road) as candidates for the Gregg Hill Reroute. VELCO examined these routes on a site visit together with representatives of ANR and DPS. According to Mr. Boyle, two of the candidate routes cannot be seen from anywhere on the Reservoir. With one of the other two, a "notch" in the tree line and the tops of two sets of structures at the top of Gregg Hill "might" be visible. [VELCO Surrebuttal-1] The GHR prefer alternative #3 (yellow) because it can't be seen from the Reservoir and, according to Mr. Boyle, crosses Gregg Hill Road on a curve where little visibility [from Gregg Hill Road] is likely. [ibid] However, we will gladly defer to the professional judgments of VELCO and ANR in the final decision.

The sector of Gregg Hill where the Reroute would go is about half a mile from the Waterbury Reservoir. Besides distance, intervening hills and the orientation of the Reservoir make it highly unlikely that the Gregg Hill portion of the Reroute will be seen from anywhere on the Reservoir, at the Little River Camp Ground, or at the Waterbury Center Day Use Area. The only exception might be from the boat launch at Blush Hill point. We came to this conclusion after careful inspection visits to various sites by a GHR

member with decades of experience as a dedicated user and patron of all resources at all locations on the Reservoir. [Abraham surrebuttal pft 6/25/05 at 3]

In considering the possible adverse visual effects of the GHR Reroute on Reservoir users, the first question is: What criteria should the Board should use to assess those effects? We suggest the second prong of the Quechee Test: Would the adverse visual effect offend an average person? In this case, we would modify “average person” to “average user of the Reservoir.” We would add two sub-criteria: (a) Will the average user be likely to perceive the suspected adverse visual effect? And (b) What adverse effect will that perception have on the average user? In the case at hand, we have shown that, in the opinion of an expert aesthetics witness, there are at least two possible routes that won’t be seen from anyplace on the Reservoir. For those routes, the adverse effect must be zero. We stress that this is the case for **all users** who visit the Reservoir for quiet experiences, undisturbed by man-made structures, machines, or boisterous activities. Other users come to the Reservoir for family-style recreations, where man-made structures such as picnic tables, barbeque pits, toilets, boat rentals, and boat launches are wanted and expected amenities of the Reservoir experience. For these visitors –the overwhelming majority – it is extremely unlikely that the chance perception of a “notch” in the forest half a mile away will detract at all from their experiences.

From the considerations above, we submit these findings.

Finding 8 The Gregg Hill Reroute will enhance the aesthetics of the state forest by eliminating visually offensive two-pole structures at a 250-foot-long crossing of Gregg Hill Road, by enhancing the access to the trail leading to Sunbathers’ Rock, and by bringing the transmission line crossing of Gregg Hill Road into accordance with best industry practices.

Finding 9 With proper selection, the GHR Reroute through the state forest on Gregg Hill will not be seen by any users of the Waterbury Reservoir.

Finding 10 The average person’s enjoyment of the Waterbury Reservoir will not be diminished or impaired even if she or he could see evidence of the GHR Reroute as a “notch” in the forest half a mile away.

D. Unsubstantiated ANR Assertions about the GHR Reroute

The GHR have conscientiously tried to make the case for the Gregg Hill Reroute in terms of the public good and the requirements of §248. There is abundant evidence of this in Orr direct pft 4/8/05 at 1,2,3,4,5,6,7,and 8 and in GHR-1, Figures 1-9. Despite this, ANR witnesses have claimed to discern only motives of personal self-interest in the same testimony.

We will limit our comments to a few salient issues.

Mr. Orr's testimony presents his opinion of the impacts of the proposed project on a very limited area, namely a portion of Gregg Hill Road and his personal residence as well as the personal residences of Mr. Abraham and Mr. Bankson [Bulmer rebuttal pft 5/23/05 at 4]

Fact: The GHR Reroute affects 17% of the total length of the LCP upgrade.

. . . the proposed reroute on state lands will have significant negative impact on the scenic resources as viewed from Waterbury Center State Park, Blush Hill access area, and on the Reservoir itself. The proposed reroute will be much more visible from these recreational facilities than the existing alignment due to the height of land. [Bulmer rebuttal pft 5/23/05 at 11]

Facts: Ms. Bulmer offers no measurements or other evidence of any of these assertions. Subsequent findings by aesthetics professionals contradict every one of them.

While there are annually up to 60,000 visitors to the Waterbury Reservoir area of Mt. Mansfield State Forest, the state forest is managed for the approximately 600,000 residents of the State of Vermont [Frederick rebuttal pft 5/23/05 at 9]. . . The proposed reroute would not benefit the public and would not be in the public interest because it would result in increased negative impacts on the state forest and Waterbury Reservoir and all associated recreational facilities. [ibid]

Fact: These oft-repeated numbers suggest a connection to the GHR Reroute that is not confirmed by any evidence but the unsupported implication that all 60,000 – or 600,000 – will be offended in some unspecified way by the Reroute.

VI. COST ACCOUNTING AT THE PROJECT, TOWN, AND STATE LEVELS

At the project level, cost accounting is relatively straightforward. The project manager knows how much everything costs. However, the Board has to consider costs to the whole community. Thus a project solution that lowers property-tax revenues would be considered a cost to the community.

Here we apparently have two different systems of accounting: project dollars and tax revenues. These disparate systems might be harmonized by assuming that taxpayers are virtually the same people as utility ratepayers, and then measuring costs and benefits to the same cohort.

DPS witness Sean Foley has advanced the proposition that property-tax losses in the town of Waterbury will be “offset” by even greater property-tax-revenue gains from the expansion of the Stowe Mountain Resort. This may be true at the state level, but Waterbury residents could reasonably feel that they’re subsidizing Stowe’s gain.

And then there are unquantifiable costs and benefits, such as the value to the state of Vermont of preserving Waterbury's historical character.

It's beyond my competence and the Board's patience to go any deeper. What I respectfully suggest is that the Board make a serious effort to quantify some of these multilevel costs and benefits. It's not in, and should not be in, the job description of either the project manager or the town manager. It deserves the attention of a professional economist.

VII. MAKING DECISIONS FOR THE FUTURE

The GHR has testified that one economic benefit of its Reroute that can be fairly quantified is property-tax revenues lost over the lifetime of a project – or longer, if we use the 55-year-old 34.5 kV line in Waterbury as an example. Property-tax losses don't stop in the first year; they can go on for years. In my cross examination of Mr. Foley, he agreed that if the cumulative adverse effects of the LCP resulted in average property-tax losses over 20 years to the town and state of 10% of each property's market value, then the cumulative losses could be \$2.16 million, about one-fifth of the total cost of the LCP. These economic effects can add up. [tr 7/7/05 at 49]

One final comment on decision-making for the future. I have suggested that the GHR Reroute could save the state future expenses and property-owner hassles by having an out-of-the-way corridor in place before the next upgrade comes along. I suggest here that this is not a simple matter of applying a probability to the presently perceived need for a future upgrade along Gregg Hill. The probability of the future need could be as low as, say, 30% or 10% and still seem like a good insurance policy. But in the present case, the Reroute would be "paid for" out of the project budget as a mitigation measure, so the insurance is cost free.

VIII. CONCLUSION

There is general agreement among aesthetic expert witnesses that the Gregg Hill Reroute is a soundly conceived alternative to the LCP proposal in the Gregg Hill neighborhood. Serious objections enter the deliberations only in the matter of exchanging rights-of-way through less than three acres in a corner of the state forest. The legislative mandate in this aspect of the LCP comes from JRH040, which directs the commissioner of forests, parks and recreation to take the necessary steps to implement the Gregg Hill Reroute if the Board finds that doing so will promote the general good of the state and not result in undue adverse impacts. The commissioner has had a full opportunity in the Docket 7032 proceedings to present his recommendations in this matter, and they have been duly considered. The Gregg Hill Reroute is simply a swap of rights-of-way. It neither creates new uses nor destroys old uses of the state forest. But that simple swap will yield substantial benefits to the state, most especially the confirmation of Vermont's

commitment to keep on being Vermont. The Board should find in favor of the Gregg Hill Reroute and direct the commissioner of forests, parks, and recreation to indicate his preference of a location for the new right of way in the state forest.

Dated at Waterbury Center, Vermont this 10th day of August, 2005

GREGG HILL RESIDENTS

William D. (Bill) Orr
Group Representative